

# Determination of Potential Agricultural Conservation Savings (Low End of Range)

## Central Coast

### Input Data from DWR

Applied Water	48	(1,000 af)
Depletion	39	(1,000 af)
ET of Applied Water	38	(1,000 af)

### Assumptions for Calculations

1. Ave. Leaching Fraction =	6%
2. % lost to Channel Evap/ET <sup>3</sup> =	4%
3. Assumed allocation of conservation betw District and On-farm district portion = 1/3 of savings * "adjustment factor"	
canal lining:	0
tailwater:	0 (adjustment factor
flexibility:	0 based on region variation
meas/price:	1 in water districts)

### Calculations from Input Data

	(1,000 af)	
Total Existing Losses	10 (Diff betw. Applied Water and ETAW)	1 (points for this region's districts of 4 points for average)
Total Irrecoverable losses	1 (Diff betw. Depletion and ETAW)	0.25 = adjustment factor
Total Recoverable losses	9 (Diff betw. Applied Water and Depletion)	8% = district portion
Ratio of Irrecoverable Loss	10% (Irrecov divided by total existing losses)	92% = on-farm portion
Portion lost to leaching	0.23 (Leach Fraction * ETAW * Irrec. Loss Ratio * Adj. Factor)	
Portion lost to Channel Evap/ET	1.92 (Applied Water * % lost to Channel Evap/ET)	
Total Loss Conservation Potential	8 (Total Existing loss - portion to leaching - portion to channel evap/ET)	
Irrecoverable Portion	0.00 (Irrec loss - portion to leaching - portion lost to channel evap/ET)	
Recoverable Portion	8 (Total Existing loss - Irrecoverable Loss Portion)	

### Incremental Distribution of Conservable Portion of Losses

	Distrib. Factor	Applied Water Reduction <sup>1</sup> (1,000 ac-ft)	Irrec. Loss Reduction <sup>2</sup> (1,000 ac-ft)	Rec. Loss Reduction (1,000 ac-ft)
No Action Increment = 1st 40%	0.40	3	0	3
CALFED Increment = next 30%	0.30	2	0	2
Remaining = final 30%	0.30	2	0	2
		8	0	8

### Summary of Savings:

Existing Applied Water Use = 48

#### Total Potential Reduction of Application

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	3	2	5
District	--	0	0	0
Total	10	3	2	5

#### Recovered Losses with Potential for Rerouting Flows

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	3	2	5
District	--	0	0	0
Total	9	3	2	5

#### Potential for Recovering Currently Irrecoverable Losses

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	0	0	0
District	--	0	0	0
Total	1	0	0	0

#### Notes:

1. Calculated as the distribution factor times the "conservable portion" of the total existing loss. The first 40% of savings potential occurs under No Action. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
2. Calculated as the distribution factor times the "conservable portion" of irrecoverable loss. The first 40% of savings potential occurs under No Action. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
3. Derived from comparing consumptive conveyance loss values from USBR *Least-Cost CVP Yield Increase Plan*, T.A #3 (Sept. 1995) to applied water values for the region. A range of 2 to 4% was used to account for uncertainty. This value accounts for consumption by bank and riparian vegetation and channel evaporation.

# Determination of Potential Agricultural Conservation Savings (High End of Range)

## Central Coast

### Input Data from DWR

Applied Water	48 (1,000 af)
Depletion	39 (1,000 af)
ET of Applied Water	38 (1,000 af)

### Assumptions for Calculations

1. Ave. Leaching Fraction =	4%
2. % lost to Channel Evap/ET <sup>3</sup> =	2%
3. Assumed allocation of conservation betw District and On-farm district portion = 1/3 of savings * "adjustment factor"	
canal lining:	0
tailwater:	0 (adjustment factor
flexibility:	0 based on region variation
meas/price:	1 in water districts)

### Calculations from Input Data

	(1,000 af)	
Total Existing Losses	10 (Diff betw. Applied Water and ETAW)	
Total Irrecoverable losses	1 (Diff betw. Depletion and ETAW)	
Total Recoverable losses	9 (Diff betw. Applied Water and Depletion)	
Ratio of Irrecoverable Loss	10% (Irrecov divided by total existing losses)	
Portion lost to leaching	0.15 (Leach Fraction * ETAW * Irrec. Loss Ratio * Adj. Factor)	
Portion lost to Channel Evap/ET	0.96 (Applied Water * % lost to Channel Evap/ET)	
Total Loss Conservation Potential	9 (Total Existing loss - portion to leaching - portion to channel evap/ET)	
Irrecoverable Portion	0.00 (Irrec loss - portion to leaching - portion lost to channel evap/ET)	
Recoverable Portion	9 (Total Existing loss - Irrecoverable Loss Portion)	

1 (points for this region's districts of 4 points for average)

**0.25 = adjustment factor**

8% = district portion

92% = on-farm portion

### Incremental Distribution of Conservable Portion of Losses

	Distrib. Factor	Applied Water Reduction <sup>1</sup> (1,000 ac-ft)	Irrec. Loss Reduction <sup>2</sup> (1,000 ac-ft)	Rec. Loss Reduction (1,000 ac-ft)
No Action Increment = 1st 40%	0.40	4	0	4
CALFED Increment = next 30%	0.30	3	0	3
Remaining = final 30%	0.30	3	0	3
		9	0	9

### Summary of Savings:

Existing Applied Water Use = 48

#### Total Potential Reduction of Application

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	3	2	5
District	--	0	0	0
Total	10	4	3	6

#### Recovered Losses with Potential for Rerouting Flows

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	3	2	5
District	--	0	0	0
Total	9	4	3	6

#### Potential for Recovering Currently Irrecoverable Losses

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	0	0	0
District	--	0	0	0
Total	1	0	0	0

#### Notes:

1. Calculated as the distribution factor times the "conservable portion" of the total existing loss. The first 40% of savings potential occurs under *No Action*. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
2. Calculated as the distribution factor times the "conservable portion" of irrecoverable loss. The first 40% of savings potential occurs under *No Action*. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
3. Derived from comparing consumptive conveyance loss values from USBR *Least-Cost CVP Yield Increase Plan*, T.A.#3 (Sept. 1995) to applied water values for the region. A range of 2 to 4% was used to account for uncertainty. This value accounts for consumption by bank and riparian vegetation and channel evaporation.